

Work Order ID 58676

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May 14, 2010 8:16:09 AM

Item ID: D6101-005

Accept



Setup Start



Revision ID:

Item Name: Saddle Billet

Stop



Start Date: 5/14/10 Start Qty: 50.00



Cust Item ID:

Required Date: 5/31/10 Req'd Qty: 50.00



Customer:

Reference:

Approvals: Process Plan: CL

Date: 10/15/14 Tooling:

Date:

Run Start



QC:

Date: SPC (Y/N):

Date:

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr Revision Nbr

D6101

Rev B

0.00

100



PURCHASING

Purchasing

Memo

0.00

Issue P/O: 8393

- a) Description: Alluminum billet
- b) 5.00" x 8.250" x 2.50" thick
- c) Tolerance on all dimensions are +0.030"/-0.000"
- d) Grain direction along 5.00" length
- e) Material: 7075-T7351 (QQ-A-250/12)
- f) Material certification required

CL 10/15/14 SO

110



Receive & Inspect for Damage & Mat'l Certs

0.00

Packaging

Memo

0.00

Packaging

Ensure material certification is attached

Proj 50

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Customer:

Reference:

Approvals: Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center ID

120



QC

Quality Control

Operation
Description

QC6- Inspect dimensions to drawing

Set Up/
Run Hours

0.00

Draw
NumberDraw
Rev.Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

130



Packaging

Packaging

Identify as per dwg & Stock Location: MAT

0.00

*Mat 10/06/02*50

140



QC

QC21- Final Inspection - Work Order Release

0.00

*Mat 10/06/02*10/06/04

Quality Control

0.00

W 10.06.03

Picklist Print

Page 1

May 14, 2010 8:16:09 AM

Work Order ID: 58676



Parent Item: D6101-005



Parent Item Name: Saddle Billet

Start Date: 5/14/10

Required Date: 5/31/10

Comments: IPP A: 01.05.04 New Issue EC

Start Qty: 50.00

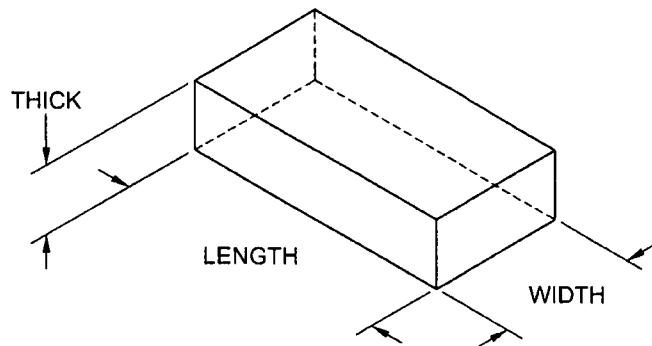
Required Qty: 50.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Qty Issued	Date Issued	Status
D6101-005P		Purchased		No		110	Each	0.0000	1		<i>Re/10/27</i>	<i>SC</i>

7075-T7351 8.25X5.0X2.5



SPECIFICATION CONTROL DRAWING



PURCHASE MATERIAL ACCORDING TO THE FOLLOWING TABLE. SPECIFY ALLOY, LENGTH x WIDTH x THICK (+0.030/-0.000), AND GRAIN DIRECTION AS SHOWN.

TOLERANCES ON ALL DIMENSIONS ARE +0.030/-0.000.

ALL DIMENSIONS ARE IN INCHES.



ACCEPTABLE SPECIFICATIONS FOR 7075-T7351 ALUMINUM ARE AMS-QQ-A-250/12, QQ-A-250/12, OR ASTM B209

Part No.	Alloy	Length	Width	Thick	Grain Direction
D6101-001	7075-T7351 (QQ-A-250/12)	6.000	6.250	2.000	Along 6.000 Length
D6101-003	7075-T7351 (QQ-A-250/12)	7.875	6.250	2.000	Along 7.875 Length
D6101-005	7075-T7351 (QQ-A-250/12)	5.000	8.250	2.500	Along 5.000 Length
D6101-007	7075-T7351 (QQ-A-250/12)	7.750	8.250	2.500	Along 7.750 Length
D6101-009	7075-T7351 (QQ-A-250/12)	8.700	8.250	2.500	Along 8.700 Length
D6101-011	7075-T7351 (QQ-A-250/12)	9.700	8.250	2.500	Along 9.700 Length
D6101-013	7075-T7351 (QQ-A-250/12)	10.100	8.250	2.500	Along 10.10 Length
D6101-015	7075-T7351 (QQ-A-250/12)	9.450	6.250	2.500	Along 9.450 Length
D6101-017	7075-T7351 (QQ-A-250/12)	6.350	6.250	2.250	Along 6.350 Length



RELEASED
09/07/15/W

C10/5114

W10.58674

B	ADDED D6101-015/-017, ADD ASTM B209			RF	09.04.23
A	NEW ISSUE			CP	01.03.30
REV.	DESCRIPTION			BY	DATE
DESIGN	CP	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA			REV. B
DRAWN	RF				
CHECKED	PM	DRAWING NO. D6101			SHEET 1 OF 1
MFG. APPR.	SJ				
APPROVED	SM	TITLE SADDLE BILLET, 7075			SCALE NTS
DE APPR.	TH				
DATE	09.04.23				
COPYRIGHT © 2001 BY DART AEROSPACE LTD <small>THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>					



Castle Metals®

A. M. Castle & Co.

PACKING SLIP

Page 1 of 1

Shipment No:354172

Ship From:	Sold To:	Ship To:	Deliver To:	
Castle Metals MONTREAL 835-SELKIRK AVENUE POINTE CLAIRE, QUEBEC H9R 3S2	DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7	DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7	DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA	
Date Shipped	F.O.B.	Freight Terms	Carrier	BOL No
27-MAY-10	ORIGIN	Prepaid	MANITOULIN	354172-2

Shipment Details	Final Destination Branch - MON
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Order No	Line No	Item No	Description
758470	1	6879.MO	2.5000.PL.7075.T7351.ALUMINUM.48.5000.144.5000 CUT 2SIDED TO 8.25 IN (+ .0310/- .0000 IN (GRAIN TO RUN ALONG 5")) X 5 IN (+ .0310/- .0000 IN (GRAIN TO RUN ALONG 5")) - ALUMINUM PLATE SAW
Purchase Order No	Part Number	Ordered Qty	Invoice Qty
8393	YOUR ITEM NUMBER: D6101-005	50 PCS	50 PCS
Details	Mill	Heat Number	Mech Id
Delivery No.	Mill	Heat Number	Mech Id
27942309		485532A6	PCS 50
			Width (IN)
			Length (IN)
			Shipped Qty (LBS)
			533.28

These commodities/technologies are subject to US Export Administration & US State Dept. Regulations and, if intended for export, were/are exported thereunder. Diversion contrary to US Law is Prohibited.

We hereby certify the material covered by this certification conforms in accordance with the above specifications and has been found to meet the applicable requirements for the material, including any specifications forming a part of the description. Test reports are on file subject to examination. All claims for defective material are waived unless made in writing to A.M. Castle & Co. within 60 days of the shipment. Material cut to the correct size, or material cut by the customer cannot be returned for credit.

Reviewed by Authorized Castle Metals Representative:

Date:

Arnold 10/06/02

17121

SHIP TO:
 A M CASTLE & CO
 3400 NO. WOLF ROAD
 FRANKLIN PARK, IL 60131

SOLD TO:
 AM CASTLE & CO-SOLD TO
 3400 NO. WOLF ROAD
 FRANKLIN PARK, IL 60131

KAISER
ALUMINUM
 Trentwood Works - Spokane, WA 99215
 Phone: (800) 367-2586

CERTIFIED TEST REPORT

Serial Number
 4173294

CUSTOMER PO NUMBER:		WORK PACKAGE:		CUSTOMER PART NUMBER:		SHIP RUN/LOAD ID:	GOV'T CONTRACT NUMBER:
01-23160				6879 A97075-60		101640/19	
KAISER ORDER NO:	LINE ITEM:	SHIP DATE:	ALLOY:	CLAD:	TEMPER:	PRODUCT DESCRIPTION:	
1087294	1	5-OCT-2009	7075	BARE	T7351	Sawed Plate	
WEIGHT SHIPPED:	QUANTITY:	B/L NUMBER:	GAUGE:	DIAMETER/WIDTH:		LENGTH:	
7196 LB	4 PCS EST.	2024315	2.5000 IN	48.500 IN		144.500 IN	

Certified Specifications

AMS 4078/RevG
 ASTM B 209/Rev07
 BSS 7055/RevA
 DPS 4.713/RevAH
 GSS16100/RevG/Amd1

AMS-QQ-A-250/12
 ASTM B 594/Rev06
 CMMP 025/RevS
 EAC MS1011/RevE
 MMS 159/RevN

AMS-STD-2154
 BAC 5439/RevH
 CSTI 006/RevC
 GAMPS 9101/RevB
 PS 21211/RevK

Test Code: 4297

Test Results

Lot: 485532A6 Cast 271

Drop 21

Ingot 1

(ASTM E8/B557)

(EN 2002-1)

Tensile:	Temper	Dir / # Tests	Ultimate KSI (MPA)	Yield KSI (MPA)	Elongation %
	T7351	LT / 2 (Min:Max)	70.6 : 71.4 (487 : 492)	58.6 : 59.1 (404 : 407)	10.4 : 11.2

(ASTM E1004)
 (EN 2004-1)

Conductivity %IACS :	40.8 Min	41.3 Max
(MS/M) :	23.7 Min	24.0 Max

(ASTM E1251)

Chemistry:	Si	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER
Actual	0.11	0.21	1.5	0.04	2.5	0.19	5.5	0.04	0.01	0.01	TOT 0.05



Trentwood Works - Spokane, WA 99215
Phone: (800) 367-2586

CERTIFIED TEST REPORT

Serial Number
4173294

Lot: 485715A7 Cast 271

Drop 21

Ingot 4

(ASTM E8/B557)

(EN 2002-1)

Tensile:	Temper	Dir / # Tests	Ultimate KSI (MPA)	Yield KSI (MPA)	Elongation %
	T7351	LT / 2 (Min:Max)	71.4 : 72.4 (492 : 499)	59.2 : 60.9 (408 : 420)	11.2 : 11.4

(ASTM E1004)

(EN 2004-1)

Conductivity %IACS :	40.9 Min	41.2 Max
(MS/M) :	23.7 Min	23.9 Max

(ASTM E1251)

Chemistry:	Si	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER
Actual	0.11	0.21	1.5	0.04	2.5	0.19	5.5	0.04	0.01	0.01	TOT 0.05

ALLOY LIMITS

Chemistry:	Si	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER	MAX
7075 MIN	0.00	0.00	1.2	0.00	2.1	0.18	5.1	0.00	0.00	0.00	EACH	0.05
MAX	0.40	0.50	2.0	0.30	2.9	0.28	6.1	0.20	0.05	0.05	TOT	0.15

Aluminum Remainder

TEST NOTES

7075-T7351 plate 3.501-4.000" thick, if
ultrasonically inspected, meets requirements of CMMPO25 per
SDR CMMPO25-KaiserT-3. 7075-T7351 plate 4.001-5.000" thick,
if ultrasonically inspected, meets requirements of CMMPO25
per
SDR CMMPO25-KaiserT-2.

Metal represented by this test report was immersion
ultrasonically tested from one side and meets the Class A
and Class B requirements of all specifications referenced
on this test report.

CERTIFICATION

KAI SER ALUMINUM FABRICATED PRODUCTS, LLC (KAI SER) HEREBY CERTIFIES THAT METAL SHIPPED UNDER THIS ORDER WAS MELTED IN THE UNITED STATES OF AMERICA OR A QUALIFYING COUNTRY PER DFARS 225.872-1(a), WAS MANUFACTURED IN THE UNITED STATES OF AMERICA, AND MEETS THE REQUIREMENTS OF THE DFARS 252.225 FOR DOMESTIC CONTENT. THIS MATERIAL HAS BEEN INSPECTED, TESTED, AND FOUND IN CONFORMANCE WITH THE REQUIREMENTS OF THE APPLICABLE SPECIFICATIONS AS INDICATED HEREIN. ALL METAL WHICH IS SOLUTION HEAT TREATED COMPLIES WITH AMS 2772. ANY WARRANTY IS LIMITED TO THAT SHOWN ON KAI SER'S STANDARD GENERAL TERMS AND CONDITIONS OF SALE. TEST REPORTS SHALL NOT BE REPRODUCED EXCEPT IN FULL, WITHOUT THE WRITTEN APPROVAL OF KAI SER ALUMINUM FABRICATED PRODUCTS, LLC LABORATORY. THE RECORDING OF FALSE, FICTITIOUS, OR FRAUDULENT STATEMENTS OR ENTRIES ON THE CERTIFICATE MAY BE PUNISHED AS A FELONY UNDER FEDERAL LAW. ISO-9001:2000 CERTIFIED.

BILL POYNOR, LABORATORIES SUPERVISOR

Castle Metals FP

HEAT NUMBER 485532 A6
MECHANICAL ID _____
ITEM CODE 6879
LOT NUMBER _____
PO NUMBER 17121
RECEIPT DATE 10-12-09
SUPPLIER KAI SER
SPECIFICATION _____
LCS NO
COMMENT _____
APPROVED B.L.

ML
10/6/02